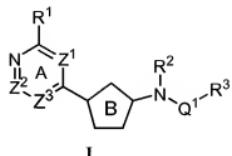


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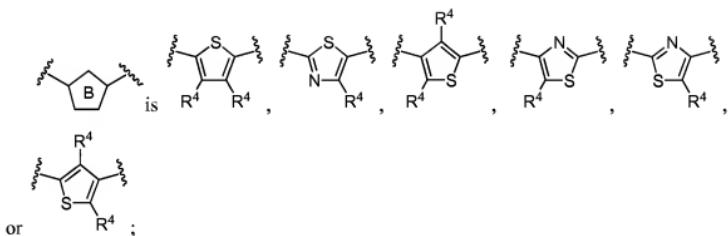
AMENDMENTS TO THE CLAIMS

1. (Currently amended) A compound of formula I:



I

or a pharmaceutically acceptable salt thereof, wherein:



or ;

R¹ is halogen, CN, NO₂, or V_mR;

Z¹ and Z³ are each independently CR^Z;

Z² is CR¹;

each occurrence of R^Z is independently halogen, CN, NO₂, or U_nR';

R² is U_nR';

each occurrence of R⁴ is independently halogen, CN, NO₂, or V_mR;

each occurrence of U or V is independently an optionally substituted C₁₋₆ alkylidene chain, wherein up to two methylene units of the chain are optionally and independently replaced by -NR-, -S-, -O-, -CS-, -OCO-, -COCO-, -CONR-, -NRCO-, -NRCO₂-,

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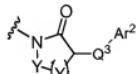
-SO₂NR-, -NRSO₂-, -CONRNR-, -NRCONR-, -OCONR-, -NRNR-, -NRSO₂NR-, -SO-, or -SO₂;

m and n are each independently 0 or 1;
each occurrence of R is independently hydrogen or an optionally substituted C₁₋₆ aliphatic group; and each occurrence of R' is independently hydrogen or an optionally substituted C₁₋₆ aliphatic group, or a 3-8-membered saturated, partially unsaturated, or fully unsaturated monocyclic ring having 0-3 heteroatoms independently selected from nitrogen, oxygen, or sulfur; ~~or an 8-12 membered saturated, partially unsaturated, or fully unsaturated bicyclic ring system having 0-5 heteroatoms independently selected from nitrogen, oxygen, or sulfur;~~ or R and R', two occurrences of R, or two occurrences of R', are taken together with the atom(s) to which they are bound to form an optionally substituted 3-12 membered saturated, partially unsaturated, or fully unsaturated monocyclic or bicyclic ring having 0-4 heteroatoms independently selected from nitrogen, oxygen, or sulfur;

Q¹ is -CO-;

R³ is Q²-Ar¹, wherein Q² is -(CHR⁶)_q-, where q is 1, 2, or 3,

or R² and Q¹-R³, taken together with the intervening nitrogen atom, form the cyclic



group: , where s is 1 or 2, each occurrence of Y is independently, as valency and stability permit, -CO-, -CS-, -SO₂-, -O-, -S-, -NR⁵-, or -C(R⁵)₂-, and R⁵ is U_aR';

Q³ is a bond or a C₁₋₆ alkylidene chain, wherein up to two methylene units of the chain are each optionally and independently replaced by -S-, -O-, -CS-, -CO₂-, -OCO-, -CO-, -COCO-, -CONR'-, -NR'CO-, -NR'CO₂-, -SO₂NR'-, -NR'SO₂-, -CONR'NR'-, -NR'CONR'-, -OCONR'-, -NR'NR'-, -NR'SO₂NR'-, -SO-, or -SO₂-, and wherein any carbon atom in the one or more methylene units is optionally substituted with one or two

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occurrences of R⁶, wherein each occurrence of R⁶ is independently halogen, CN, NO₂, or U_nR', or two occurrences of R⁶, or R' and R⁶, taken together with the atoms to which they are bound, form an optionally substituted 3-6-membered cycloalkyl, heterocyclyl, aryl or heteroaryl ring; and

Ar¹ is a 5-8 membered saturated, partially unsaturated, or fully unsaturated monocyclic ring having 0-3 heteroatoms independently selected from oxygen or sulfur, or an 8-12 membered saturated, partially unsaturated, or fully unsaturated bicyclic ring system having 0-5 heteroatoms independently selected from oxygen or sulfur; wherein Ar¹ is optionally substituted with 0-5 independent occurrences of TR⁷; wherein T is a bond or is a C₁-C₆ alkylidene chain wherein up to two methylene units of T are optionally and independently replaced by -NR-, -S-, -O-, -CS-, -CO₂-, -OCO-, -CO-, -COCO-, -CONR-, -NRCO-, -NRCO₂-, -SO₂NR-, -NRSO₂-, -CONRNR-, -NRCONR-, -OCONR-, -NRNR-, -NRSO₂NR-, -SO-, or -SO₂;

Ar² is a 5-8 membered saturated, partially unsaturated, or fully unsaturated monocyclic ring having 0-3 heteroatoms independently selected from nitrogen, oxygen, or sulfur, or an 8-12 membered saturated, partially unsaturated, or fully unsaturated bicyclic ring system having 0-5 heteroatoms independently selected from nitrogen, oxygen, or sulfur; wherein Ar² is optionally substituted with 0-5 independent occurrences of TR⁷; wherein T is a bond or is a C₁-C₆ alkylidene chain wherein up to two methylene units of T are optionally and independently replaced by -NR-, -S-, -O-, -CS-, -CO₂-, -OCO-, -COCO-, -CONR-, -NRCO-, -NRCO₂-, -SO₂NR-, -NRSO₂-, -CONRNR-, -NRCONR-, -OCONR-, -NRNR-, -NRSO₂NR-, -SO-, or -SO₂;

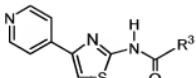
each occurrence of R⁷ is independently R', halogen, NO₂, or CN;
each of the optional substituents of said aryl or heteroaryl ring is selected from halogen; -R^o; -OR^o; -SR^o; phenyl optionally substituted with R^o; -O(phenyl), optionally substituted with R^o; -(CH₂)₁₋₂(phenyl), optionally substituted with R^o; -CH=CH(phenyl),

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optionally substituted with R° ; $-NO_2$; $-CN$; $-N(R^\circ)_2$; $-NR^\circ C(O)R^\circ$; $-NR^\circ C(S)R^\circ$;
 $-NR^\circ C(O)N(R^\circ)_2$; $-NR^\circ C(S)N(R^\circ)_2$; $-NR^\circ CO_2R^\circ$; $-NR^\circ NR^\circ C(O)R^\circ$;
 $-NR^\circ NR^\circ C(O)N(R^\circ)_2$; $-NR^\circ NR^\circ CO_2R^\circ$; $-C(O)C(O)R^\circ$; $-C(O)CH_2C(O)R^\circ$; $-CO_2R^\circ$;
 $-C(O)R^\circ$; $-C(S)R^\circ$; $-C(O)N(R^\circ)_2$; $-C(S)N(R^\circ)_2$; $-OC(O)N(R^\circ)_2$; $-OC(O)R^\circ$; $-C(O)N(OR^\circ)$
 R° ; $-C(NOR^\circ)R^\circ$; $-S(O)_2R^\circ$; $-S(O)_3R^\circ$; $-SO_2N(R^\circ)_2$; $-S(O)R^\circ$; $-NR^\circ SO_2N(R^\circ)_2$;
 $-NR^\circ SO_2R^\circ$; $-N(OR^\circ)R^\circ$; $-C(=NH)N(R^\circ)_2$; $-P(O)_2R^\circ$; $-PO(R^\circ)_2$; $-OPO(R^\circ)_2$;
 $-(CH_2)_{0-2}NHC(O)R^\circ$; wherein each independent occurrence of R° is selected from hydrogen, an optionally substituted C_{1-6} aliphatic, an unsubstituted 5-6 membered heteroaryl or heterocyclic ring, phenyl, $-O(phenyl)$, or $-CH_2(phenyl)$, wherein optional substituents on the aliphatic group of R° are selected from NH_2 , $NH(C_{1-4}$ aliphatic), $N(C_{1-4}$ aliphatic) $_2$, halogen, C_{1-4} aliphatic, OH , $O(C_{1-4}$ aliphatic), NO_2 , CN , CO_2H , $CO_2(C_{1-4}$ aliphatic), $O(haloC_{1-4}$ aliphatic), or $haloC_{1-4}$ aliphatic, or two independent occurrences of R° , on the same substituent or different substituents, taken together with the atom(s) to which each R° group is bound, form a 3-12 membered saturated, partially unsaturated, or fully unsaturated monocyclic or bicyclic ring having 0-4 heteroatoms independently selected from nitrogen, oxygen, or sulfur; and

each of the optional substituents on said alkylidene chain, aliphatic, cycloalkyl, or heterocyclyl is selected from the list of optional substituents of optional substituents for aryl and heteroaryl rings and further comprise $=O$, $=S$, $=NNHR^*$, $=NN(R^*)_2$, $=NNHC(O)R^*$, $=NNHCO_2(alkyl)$, $=NNHSO_2(alkyl)$, or $=NR^*$, where each R^* is independently selected from hydrogen or a C_{1-6} aliphatic group;

provided that:



for compounds having the structure:

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R^3 is not any one of the following groups: $-\text{CH}_2(3\text{-NHCOPh-phenyl})$, $-\text{CH}_2\text{-pyrrolidine}$, unsubstituted benzyl, $-\text{CH}_2\text{-naphthyl}$, $-\text{CH}_2\text{CH}_2\text{-3-(4-Cl-phenyl)-1-phenyl-1-H-pyrazol-4-yl}$, or $-\text{CH}_2(1,3\text{-dioxoisooindole})$.

2-3. (Canceled)

4. (Previously presented) The compound of claim 1, wherein R^2 is hydrogen, or is U_nR' , where n is 1, and U is a C_{1-6} alkylidene chain wherein one or two methylene units are optionally and independently replaced by O, NR, S, or C(O).

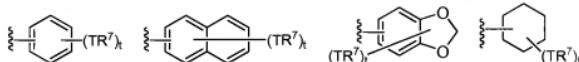
5. (Previously presented) The compound of claim 1, wherein U is $-\text{CH}_2\text{-}$, $-\text{CH}_2\text{CH}_2\text{-}$, $-\text{CH}_2\text{CH}_2\text{CH}_2\text{-}$, $-\text{CH}_2\text{O-}$, $-\text{CH}_2\text{S-}$, $-\text{CH}_2\text{NR-}$, $-\text{CH}_2\text{CH}_2\text{O-}$, $-\text{CH}_2\text{CH}_2\text{S-}$, $-\text{CH}_2\text{CH}_2\text{NR-}$, $-\text{CH}_2\text{CH}_2\text{CH}_2\text{O-}$, $-\text{CH}_2\text{CH}_2\text{CH}_2\text{S-}$, $-\text{CH}_2\text{CH}_2\text{CH}_2\text{NR-}$, $-\text{CH}_2\text{CH}_2\text{OCH}_2\text{CH}_2\text{-}$, $-(\text{CH}_2)_4\text{NHCH}_2\text{-}$, $-(\text{CH}_2)_3\text{NHCH}_2\text{CH}_2\text{-}$, or $-\text{CH}_2\text{CH}_2\text{NHCH}_2\text{CH}_2\text{-}$, and preferred R' groups are hydrogen, $C_1\text{-}C_4$ alkyl, optionally substituted tetrahydropyranyl, pyrrolidinyl, piperidinyl, piperazinyl, morpholinyl, thiomorpholinyl, pyridinyl, phenyl, or cyclohexyl, or R and R' , taken together with the nitrogen atom to which they are bound, form an optionally substituted 5- or 6-membered heterocyclyl ring.

6-7. (Canceled)

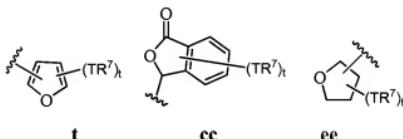
8. (Previously presented) The compound of claim 1, wherein R^6 is CH_2OH , $\text{CH}_2\text{CH}_2\text{OH}$, OH, OMe , OEt , NH_2 , $\text{NH}(\text{Me})$, $\text{NH}(\text{Et})$, $\text{N}(\text{Me})(\text{Me})$, CH_2NH_2 , $\text{CH}_2\text{CH}_2\text{NH}_2$, $\text{NHCO}_2t\text{-butyl}$, phenyl, cyclopentyl, methyl, ethyl, isopropyl, cyclopropyl, $\text{NH}(\text{CH}_2)_3\text{NH}_2$, $\text{NH}(\text{CH}_2)_2\text{NH}_2$, $\text{NH}(\text{CH}_2)_2\text{NHEt}$, $\text{NHCH}_2\text{pyridyl}$, $\text{NHSO}_2\text{phenyl}$, $\text{NHC(O)CH}_2\text{C(O)O}t\text{-butyl}$, $\text{NHC(O)CH}_2\text{NH}_3$, and $\text{NHCH}_2\text{-imidazol-4-yl}$.

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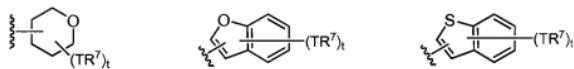
9. (Previously presented) The compound of claim 3, wherein Ar¹ is:



a e i k



t cc ee



ii jj kk



mm oo pp

wherein t is 0, 1, 2, 3, 4 or 5, and wherein any Ar¹ is bonded to Q² through any substitutable carbon atom, and wherein one or more hydrogen atoms on any substitutable carbon atom is substituted with one or more independent occurrences of TR⁷.

10. (Previously presented) The compound of claim 9, wherein Ar¹ is a, e, i, k, cc, jj, or pp.

11. (Original) The compound of claim 9, wherein T is a bond or is an optionally substituted C₁₋₆ alkylidene chain wherein one or two methylene units are optionally and

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independently replaced by -O-, -NR-, -S-, -SO₂-, -COO-, -CO-, -OSO₂-, -NRSO₂, -CONR-, or -SO₂NR-, and R⁷ is R' or halogen.

12. (Original) The compound of claim 9, wherein each occurrence of TR⁷ is independently -C₁₋₃alkyl, -OR', -SR', -CF₃, -OCF₃, -SCF₃, -F, -Cl, I, -Br, -COOR', -COR', -O(CH₂)₄N(R)(R'), -O(CH₂)₃N(R)(R'), -O(CH₂)₂N(R)(R'), -O(CH₂)N(R)(R'), -O(CH₂)₄CON(R)(R'), -O(CH₂)₃CON(R)(R'), -O(CH₂)₂CON(R)(R'), -O(CH₂)CON(R)(R'), -C(O)N(R)(R'), -(CH₂)₄OR', -(CH₂)₃OR', -(CH₂)₂OR', -CH₂OR', optionally substituted phenyl or benzyl, -N(R)(R'), -(CH₂)₄N(R)(R'), -(CH₂)₃N(R)(R'), -(CH₂)₂N(R)(R'), -(CH₂)N(R)(R'), or SO₂N(R)(R'), NRSO₂R', CON(R)(R'), or -OSO₂R'.

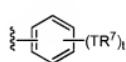
13. (Canceled)

14. (Previously presented) The compound of claim 1, wherein Q³ is a direct bond, or is -(CHR⁶)_q-, -(CHR⁶)_qO-, -(CHR⁶)_qS-, -(CHR⁶)_qS(O)₂-, -(CHR⁶)_qS(O)-, -(CHR⁶)_qNR-, or -(CHR⁶)_qC(O)-, wherein q is 0, 1, 2, or 3, and R⁶ is R', -N(R)(R'), -(CH₂)₁₋₄N(R)(R'), -OR', -(CH₂)₁₋₄OR', -NR(CH₂)₁₋₄N(R)(R'), -NR(CH₂)₁₋₄SO₂R', -NR(CH₂)₁₋₄COOR', or -NR(CH₂)₁₋₄COR', or two occurrences of R⁶, taken together with the atoms to which they are bound, form an optionally substituted 3-6-membered saturated, partially unsaturated, or fully unsaturated ring.

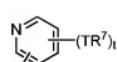
15. (Original) The compound of claim 14, wherein R⁶ is CH₂OH, CH₂CH₂OH, OH, OMe, OEt, NH₂, NH(Me), NH(Et), N(Me)(Me), CH₂NH₂, CH₂CH₂NH₂, NHCO₂t-butyl, phenyl, cyclopentyl, methyl, ethyl, isopropyl, cyclopropyl, NH(CH₂)₃NH₂, NH(CH₂)₂NH₂, NH(CH₂)₂NH₂NET, NHCH₂pyridyl, NHSO₂phenyl, NHC(O)CH₂C(O)Ot-butyl, NHC(O)CH₂NH₃, and NHCH₂-imidazol-4-yl.

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16. (Previously presented) The compound of claim 1, wherein Ar^2 is:



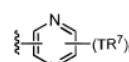
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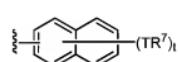
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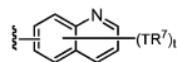
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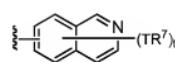
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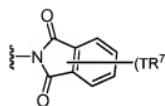
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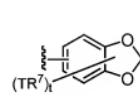
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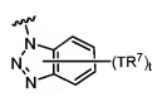
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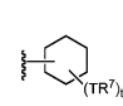
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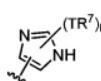
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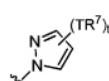
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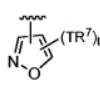
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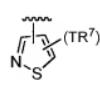
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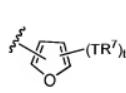


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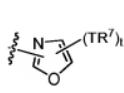


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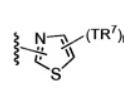
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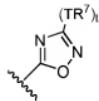
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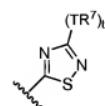
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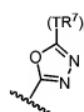
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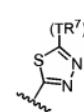
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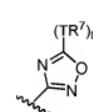
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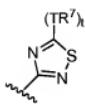
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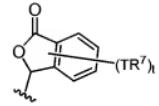
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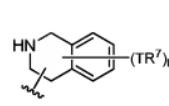
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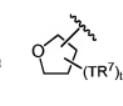
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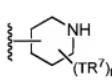
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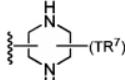
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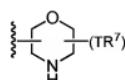
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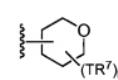
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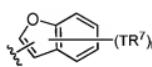
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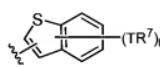
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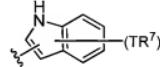
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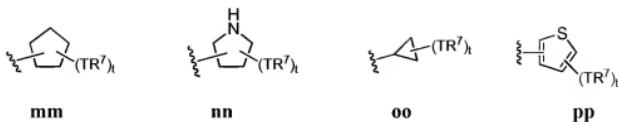


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wherein t is 0, 1, 2, 3, 4 or 5, and wherein any Ar^2 is bonded to Q^3 through any substitutable nitrogen or carbon atom, and wherein one or more hydrogen atoms on any substitutable nitrogen or carbon atom is substituted with one or more independent occurrences of TR^7 .

17. (Original) The compound of claim 16, wherein Ar² is a, b, e, g, h, i, j, k, n, r, cc, dd, ff, ii, ll, or pp.

18. (Original) The compound of claim 16, wherein T is a bond or is an optionally substituted C₁₋₆ alkylidene chain wherein one or two methylene units are optionally and independently replaced by -O-, -NR-, -S-, -SO₂-, -COO-, -CO-, -OSO₂-, -NRSO₂, -CONR-, or -SO₂NR-, and R⁷ is R' or halogen.

19. (Original) The compound of claim 16, wherein each occurrence of TR⁷ is independently -C₁₋₃alkyl, -OR', -SR', -CF₃, -OCF₃, -SCF₃, -F, -Cl, I, -Br, -COOR', -COR', -O(CH₂)₄N(R)(R'), -O(CH₂)₃N(R)(R'), -O(CH₂)₂N(R)(R'), -O(CH₂)N(R)(R'), -O(CH₂)₄CON(R)(R'), -O(CH₂)₃CON(R)(R'), -O(CH₂)₂CON(R)(R'), -O(CH₂)CON(R)(R'), -C(O)N(R)(R'), -(CH₂)₄OR', -(CH₂)₃OR', -(CH₂)₂OR', -CH₂OR', optionally substituted phenyl or benzyl, -N(R)(R'), -(CH₂)₄N(R)(R'), -(CH₂)₃N(R)(R'), -(CH₂)₂N(R)(R'), -(CH₂)N(R)(R'), or SO₂N(R)(R'), NRSO₂R', CON(R)(R'), or -OSO₂R'.

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20. (Previously presented) The compound of claim 1, wherein R⁵ is hydrogen, (CH₂)₃OR', (CH₂)₂OR', (CH₂)OR', (CH₂)₃N(R')₂, (CH₂)₂N(R')₂, (CH₂)N(R')₂, or C₁₋₄aliphatic.

21-22. (Canceled)

23. (Original) The compound of claim 1, wherein each occurrence of R¹ is independently hydrogen, halogen, optionally substituted C₁-C₄aliphatic, OR, SR, or N(R)₂.

24. (Previously presented) The compound of claim 23, wherein each occurrence of R¹ is independently hydrogen, halogen, -CH₃, -CH₂CH₃, -OH, -OCH₃, -SCH₃, -NH₂, -N(CH₃)₂, -N(CH₂CH₃)₂, -NH(CH₂)₂NHCH₃, -NH(cyclopropyl), -NH(CH₂)cyclopropyl, or -NH(CH₂)₂N(CH₃)₂.

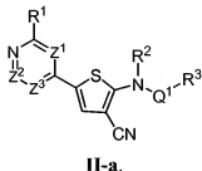
25. (Original) The compound of claim 1, wherein each occurrence of R^Z is independently hydrogen, halogen, C₁-C₄aliphatic, OH, OR', or N(R)(R').

26. (Original) The compound of claim 25, wherein each occurrence of R^Z is independently hydrogen, halogen, Me, OH, OMe, NH₂, or N(Me)₂.

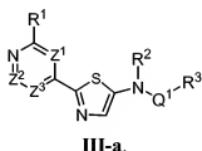
27. (Previously presented) The compound of claim 1, wherein R⁴ groups are each independently hydrogen, C₁₋₆aliphatic, CN, C(=O)N(R)₂, or halogen.

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28. (Previously presented) The compound of claim 1, wherein one occurrence of R⁴ is CN and compounds have the general structure **II-a**:

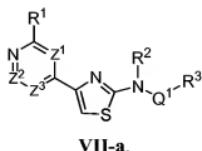


29. (Previously presented) The compound of claim 1, wherein R⁴ is hydrogen and compounds have the general structure **III-a**:



30. (Canceled)

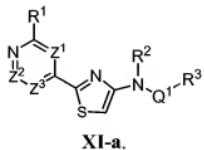
31. (Previously presented) The compound of claim 1, wherein R⁴ is hydrogen and compounds have the general structure **VII-a**:



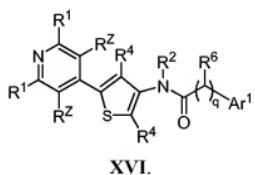
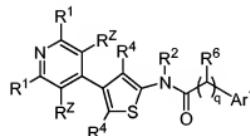
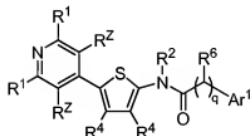
32. (Canceled)

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33. (Previously presented) The compound of claim 1, wherein R⁴ is hydrogen and compounds have the general structure **XI-a**:

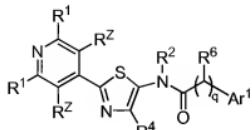


34. (Previously presented) The compound of claim 9, wherein Q¹ is -CO-, Q² is CHR⁶, q is 1 2, or 3, and compounds have one of formulas **XIV**, **XV**, or **XVI**:

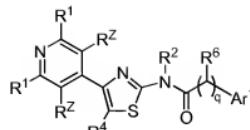


35. (Previously presented) The compound of claim 9, wherein Q¹ is -CO-, Q² is CHR⁶, q is 1, 2 or 3, and compounds have one of formulas **XVII**, **XVIII**, or **XIX**:

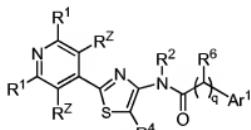
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XVII



XVIII



XIX.

36. (Previously presented) The compound of claims 34 or 35, wherein compound variables are selected from one of more of the following groups:

- each occurrence of R¹ is independently hydrogen, halogen, optionally substituted C₁-C₄aliphatic, OR, SR, or N(R)₂;
- each occurrence of R¹ is independently hydrogen, halogen, -CH₃, -CH₂CH₃, -OH, -OCH₃, -SCH₃, -NH₂, -N(CH₃)₂, -N(CH₂CH₃)₂, -NH(CH₂)₂NHCH₃, -NH(cyclopropyl), -NH(CH₂)cyclopropyl, or -NH(CH₂)₂N(CH₃)₂;
- each occurrence of R^Z is independently hydrogen, halogen, optionally substituted C₁-C₄aliphatic, OH, O(R'), or N(R)(R');
- each occurrence of R^Z is independently hydrogen, halogen, Me, OH, OMe, NH₂, or N(Me)₂;
- R² is hydrogen, or is U_nR', where n is 1, and U is -CH₂-, -CH₂CH₂-, -CH₂CH₂CH₂CH₂-, -CH₂O-, -CH₂S-, -CH₂NR-, -CH₂CH₂O-, -CH₂CH₂S-, -CH₂CH₂NR-, -CH₂CH₂CH₂O-, -CH₂CH₂CH₂S-, -CH₂CH₂CH₂NR-, -CH₂CH₂OCH₂CH₂-, -(CH₂)₄NHCH₂-, -(CH₂)₃NHCH₂CH₂-, or

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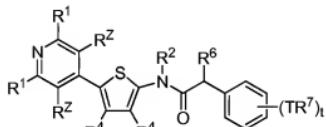
-CH₂CH₂NHCH₂CH₂-, and R' groups are hydrogen, C₁-C₄alkyl, optionally substituted tetrahydropyranyl, pyrrolidinyl, piperidinyl, piperazinyl, morpholinyl, thiomorpholinyl, pyridinyl, phenyl, or cyclohexyl, or R and R', taken together with the nitrogen atom to which they are bound, form an optionally substituted 5- or 6-membered heterocycl ring;

- f) each occurrence of R⁴ is independently hydrogen, C₁-aliphatic, CN, COR, COOR, CON(R)₂, or halogen;
- g) q is 1, 2, or 3;
- h) R⁶ is R', -N(R)(R'), -(CH₂)₁₋₄N(R)(R'), -OR', -(CH₂)₁₋₄OR', -NR(CH₂)₁₋₄N(R)(R'), -NR(CH₂)₁₋₄SO₂R', -NR(CH₂)₁₋₄COOR', or -NR(CH₂)₁₋₄COR', or two occurrences of R⁶, taken together with the atoms to which they are bound, form an optionally substituted 3-6-membered saturated, partially unsaturated, or fully unsaturated ring;
- i) R⁶ is CH₂OH, CH₂CH₂OH, OH, OMe, OEt, NH₂, NH(Me), NH(Et), N(Me)(Me), CH₂NH₂, CH₂CH₂NH₂, NHCO₂t-butyl, phenyl, cyclopentyl, methyl, ethyl, isopropyl, cyclopropyl, NH(CH₂)₃NH₂, NH(CH₂)₂NH₂, NH(CH₂)₂NHEt, NHCH₂pyridyl, NHSO₂phenyl, NHC(O)CH₂C(O)Or-butyl, NHC(O)CH₂NH₂, and NHCH₂-imidazol-4-yl;
- j) Ar¹ is ring **a**, **e**, **i**, **k**, **cc**, **jj**, or **pp** wherein t is 0, 1, 2, or 3, and T is a bond or is an optionally substituted C₁₋₆ alkylidene chain wherein one or two methylene units are optionally and independently replaced by -O-, -NR-, -S-, -SO₂-, -COO-, -CO-, -OSO₂-, -NRSO₂-, -CONR-, or -SO₂NR-, and R⁷ is R' or halogen; or
- k) Ar¹ is ring **a**, **e**, **i**, **k**, **cc**, **jj**, or **pp** wherein t is 0, 1, 2, or 3, and each occurrence of TR⁷ is independently -C₁₋₃alkyl, -OR', -SR', -CF₃, -OCF₃, -SCF₃, -F, -Cl, I, -Br, -COR', -COR-, -O(CH₂)₄N(R)(R'), -O(CH₂)₃N(R)(R'), -O(CH₂)₂N(R)(R'), -O(CH₂)N(R)(R'), -O(CH₂)₄CON(R)(R'), -O(CH₂)₃CON(R)(R'), -O(CH₂)₂CON(R)(R'), -O(CH₂)CON(R)(R'), -C(O)N(R)(R'), -(CH₂)₄OR', -(CH₂)₃OR', -(CH₂)₂OR', -CH₂OR',

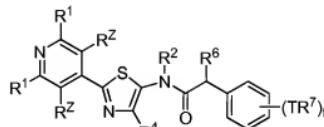
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optionally substituted phenyl or benzyl, -N(R)(R'), -(CH₂)₄N(R)(R'), -(CH₂)₃N(R)(R'), -(CH₂)₂N(R)(R'), -(CH₂)N(R)(R'), -SO₂N(R)(R'), -NRSO₂R', -CON(R)(R'), or -OSO₂R'.

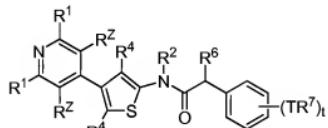
37. (Previously presented) The compound of claim 34 or 35, q is 1, and Ar¹ is optionally substituted phenyl and compounds of general formula **XIV-A** through **XIX-A** are provided:



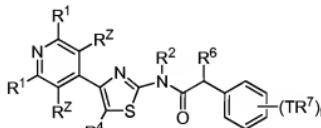
XIV-A



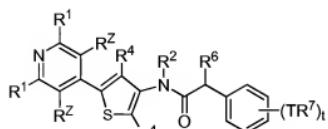
XV-A



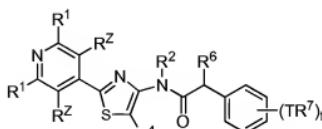
XVI-A



XVII-A



XVIII-A



XIX-A

wherein:

each occurrence of R¹ is hydrogen;

each occurrence of R^Z is hydrogen;

R² is hydrogen, or is U_nR', where n is 1, and U is -CH₂-, -CH₂CH₂-,

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-CH₂CH₂CH₂-, -CH₂CH₂CH₂CH₂-, -CH₂O-, -CH₂S-, -CH₂NR-, -CH₂CH₂O-,
-CH₂CH₂S-, -CH₂CH₂NR-, -CH₂CH₂CH₂O-, -CH₂CH₂CH₂S-, -CH₂CH₂CH₂NR-,
-CH₂CH₂CH₂CH₂O-, -CH₂CH₂CH₂S-, -CH₂CH₂CH₂CH₂NR-, -CH₂CH₂OCH₂CH₂-,
-(CH₂)₄NHCH₂-, -(CH₂)₃NHCH₂CH₂-, or -CH₂CH₂NHCH₂CH₂-, and R' groups are
hydrogen, C₁-C₄alkyl, optionally substituted tetrahydropyranyl, pyrrolidinyl, piperidinyl,
piperazinyl, morpholinyl, thiomorpholinyl, pyridinyl, phenyl, or cyclohexyl, or R and R',
taken together with the nitrogen atom to which they are bound, form an optionally
substituted 5- or 6-membered heterocycl ring;

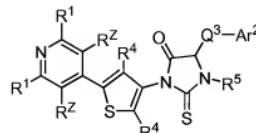
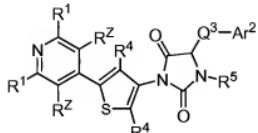
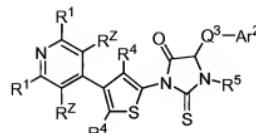
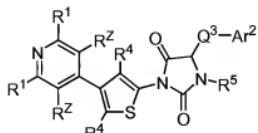
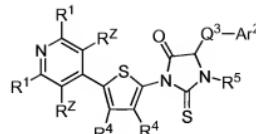
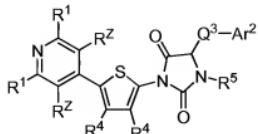
each occurrence of R⁴ is independently hydrogen, C₁-6aliphatic, CN, CON(R)₂, or
halogen;

R⁶ is R', -N(R)(R'), -(CH₂)₁₋₄N(R)(R'), -OR', -(CH₂)₁₋₄OR',
-NR(CH₂)₁₋₄N(R)(R'), -NR(CH₂)₁₋₄SO₂R', -NR(CH₂)₁₋₄COOR', or
-NR(CH₂)₁₋₄COR'; and

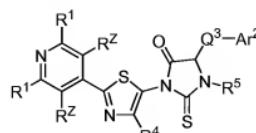
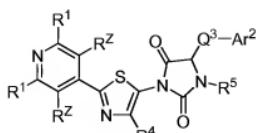
t is 0, 1, 2, or 3, and each occurrence of TR⁷ is independently -C₁₋₃alkyl, -OR',
-SR', -CF₃, -OCF₃, -SCF₃, -F, -Cl, I, -Br, -COOR', -COR', -O(CH₂)₄N(R)(R'),
-O(CH₂)₃N(R)(R'), -O(CH₂)₂N(R)(R'), -O(CH₂)N(R)(R'), -O(CH₂)₄CON(R)(R'),
-O(CH₂)₃CON(R)(R'), -O(CH₂)₂CON(R)(R'), -O(CH₂)CON(R)(R'), -C(O)N(R)(R'),
-(CH₂)₄OR', -(CH₂)₃OR', -(CH₂)₂OR', -CH₂OR', optionally substituted phenyl or benzyl,
-N(R)(R'), -(CH₂)₄N(R)(R'), -(CH₂)₃N(R)(R'), -(CH₂)₂N(R)(R'),
-(CH₂)N(R)(R'), -SO₂N(R)(R'), -NRSO₂R', -CON(R)(R'), or -OSO₂R'.

38. (Previously presented) The compound of claim 16, wherein R² and Q¹-R³, taken
together with the atoms to which they are bound form a 5-membered cyclic group, and
compounds have the general formula **XX** through **XXV**:

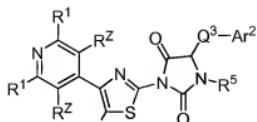
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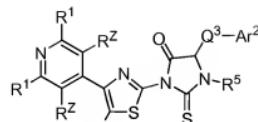
39. (Previously presented) The compound of claim 16, R² and Q¹-R³, taken together with the atoms to which they are bound form a 5-membered cyclic group, and compounds have the general formula **XXVI** through **XXXI**:



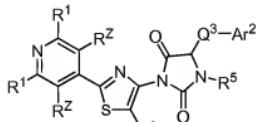
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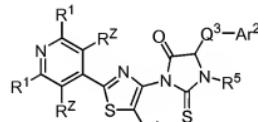
XXVIII



XXIX

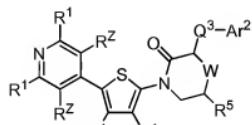


XXX

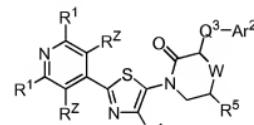


XXXI.

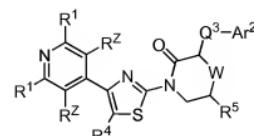
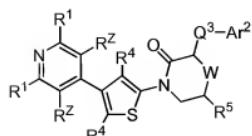
40. (Previously presented) The compound of claim 16, wherein R^2 and Q^1-R^3 , taken together with the atoms to which they are bound form a 6-membered cyclic group, and compounds have the general formula XXXII through XXXVII:



XXXII

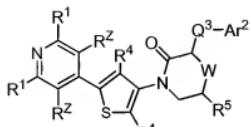


XXXIII



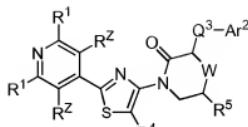
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XXXIV



XXXVI

XXXV



XXXVII

wherein W is O, NR⁵, or CHR⁵.

41. (Original) The compound of claims 38, 39 or 40, wherein compound variables are selected from one of more of the following groups:

- a) each occurrence of R¹ is independently hydrogen, halogen, optionally substituted C₁-C₄aliphatic, OR, SR, or N(R)₂;
- b) each occurrence of R^Z is independently hydrogen, halogen, optionally substituted C₁-C₄aliphatic, OH, OR' or N(R)(R');
- c) each occurrence of R⁴ is independently hydrogen, C₁-aliphatic, CN, COR, COOR, CON(R)₂, or halogen;
- d) R⁵ is hydrogen, (CH₂)₂OR', (CH₂)₂OR', (CH₂)OR', (CH₂)₃N(R')₂, (CH₂)₂N(R')₂, (CH₂)N(R')₂, or C₁-4aliphatic;
- e) Q³ is a direct bond, or is -(CHR⁶)_q-, -(CHR⁶)_qO-, -(CHR⁶)_qS-, -(CHR⁶)_qS(O)₂-, -(CHR⁶)_qS(O)-, -(CHR⁶)_qNR-, or -(CHR⁶)_qC(O)-, wherein q is 0, 1, 2, or 3; and
- f) Ar² is ring **a**, **b**, **e**, **g**, **h**, **i**, **j**, **k**, **n**, **r**, **ee**, **dd**, **ff**, **jj**, **ll**, or **pp**, wherein t is 0, 1, 2, or 3, and T is a bond or is an optionally substituted C₁-6 alkylidene chain wherein one or two methylene units are optionally and independently replaced by -O-, -NR-, -S-, -SO₂-, -COO-, -CO-, -OSO₂-, -NRSO₂, -CONR-, or -SO₂NR-, and R⁷ is R' or halogen.

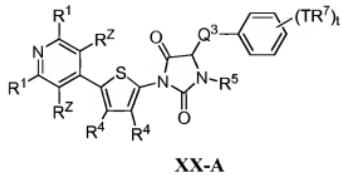
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42. (Previously presented) The compound of claims 38, 39 or 40, wherein compound variables are selected from one of more of the following groups:

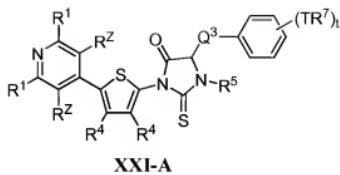
- a) each occurrence of R^1 is independently hydrogen, halogen, $-CH_3$, $-CH_2CH_3$, $-OH$, $-OCH_3$, $-SCH_3$, $-NH_2$, $-N(CH_3)_2$, $-N(CH_2CH_3)_2$, $NH(CH_2)_2NHCH_3$, $NH(cyclopropyl)$, $NH(CH_2)cyclopropyl$, or $NH(CH_2)_2N(CH_3)_2$;
- b) each occurrence of R^Z is independently hydrogen, halogen, Me , OH , OMe , NH_2 , or $N(Me)_2$;
- c) each occurrence of R^4 is independently hydrogen, C_{1-6} aliphatic, CN , $CON(R)_2$, or halogen;
- d) R^5 is hydrogen, $(CH_2)_3OR'$, $(CH_2)_2OR'$, $(CH_2)OR'$, $(CH_2)_3N(R')_2$, $(CH_2)_2N(R')_2$, $(CH_2)N(R')_2$, or C_{1-4} aliphatic;
- e) Q^3 is a direct bond, or is $-(CHR^6)_q-$, $-(CHR^6)_qO-$, $-(CHR^6)_qS-$, $-(CHR^6)_qS(O)_2-$, $-(CHR^6)_qS(O)-$, $-(CHR^6)_qNR-$, or $-(CHR^6)_qC(O)-$, wherein q is 0, 1, 2, or 3; and
- f) Ar^2 is ring **a**, **b**, **e**, **g**, **h**, **i**, **j**, **k**, **n**, **r**, **ee**, **dd**, **ff**, **jj**, **ll**, or **pp**, wherein t is 0, 1, 2, or 3, and each occurrence of TR^7 is independently $-C_{1-3}$ alkyl, $-OR'$, $-SR'$, $-CF_3$, $-OCF_3$, $-SCF_3$, $-F$, $-Cl$, I , $-Br$, $-COOR'$, $-COR'$, $-O(CH_2)_4N(R)(R')$, $-O(CH_2)_3N(R)(R')$, $-O(CH_2)_2N(R)(R')$, $-O(CH_2)N(R)(R')$, $-O(CH_2)_4CON(R)(R')$, $-O(CH_2)_3CON(R)(R')$, $-O(CH_2)_2CON(R)(R')$, $-O(CH_2)CON(R)(R')$, $-C(O)N(R)(R')$, $-(CH_2)_4OR'$, $-(CH_2)_3OR'$, $-(CH_2)_2OR'$, $-CH_2OR'$, optionally substituted phenyl or benzyl, $-N(R)(R')$, $-(CH_2)_4N(R)(R')$, $-(CH_2)_3N(R)(R')$, $-(CH_2)_2N(R)(R')$, $-(CH_2)N(R)(R')$, $-SO_2N(R)(R')$, $-NRSO_2R'$, $-CON(R)(R')$, or $-OSO_2R'$.

43. (Previously presented) The compound of claims 38, 39 or 40, wherein Ar^2 is optionally substituted phenyl and compounds of general formula **XX-A**, through **XXXVII** are provided:

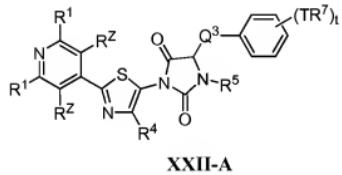
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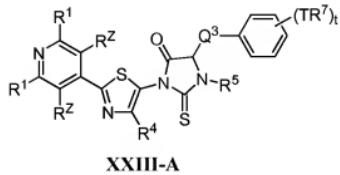
XX-A



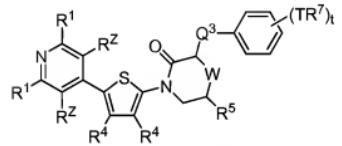
XXI-A



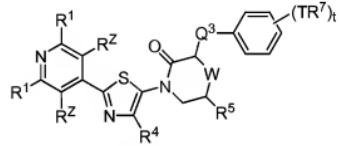
XXII-A



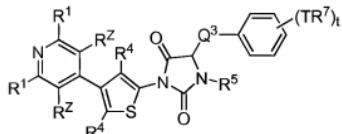
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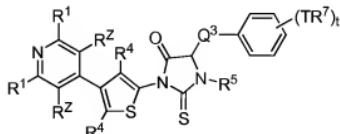
XXIV-A



XXV-A

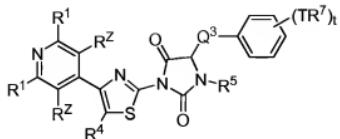


XXVI-A

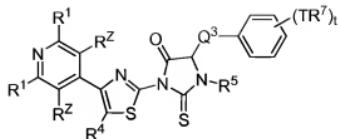


XXVII-A

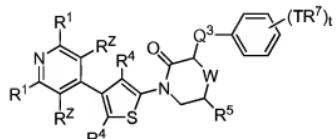
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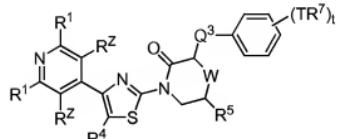
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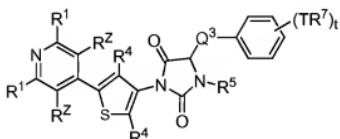
XXIX-A



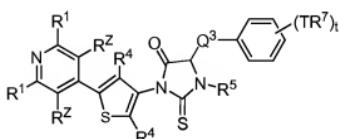
XXX-A



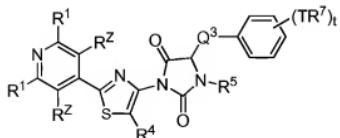
XXXI-A



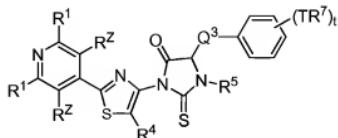
XXXII-A



XXXIII-A

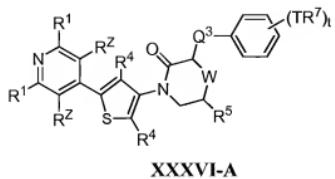


XXXIV-A

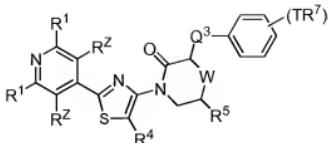


XXXV-A

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XXXVI-A



XXXVII-A

44. (Previously presented) The compound of claim 43, wherein compound variables are selected from:

each occurrence of R^1 is hydrogen;

each occurrence of R^Z is hydrogen;

each occurrence of R⁴ is independently hydrogen, C₁₋₆aliphatic, CN, CON(R)₂, or halogen;

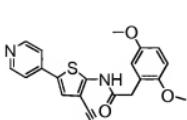
R^5 is hydrogen, $(CH_2)_3OR'$, $(CH_2)_2OR'$, $(CH_2)OR'$, $(CH_2)_3N(R')_2$, $(CH_2)_2N(R')_2$, $(CH_2)N(R')_2$, or C_{1-4} aliphatic;

Q^3 is a direct bond, or is $-(CHR^6)_q-$, $-(CHR^6)_qO-$, $-(CHR^6)_qS-$, $-(CHR^6)_qSO(O)_2-$, $-(CHR^6)_qS(O)O-$, $-(CHR^6)_qNR-$, or $-(CHR^6)_qC(O)O-$, wherein q is 0, 1, 2, or 3; and

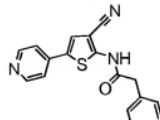
t is 0, 1, 2, or 3, and each occurrence of TR⁷ is independently -C₁₋₃alkyl, -OR', -SR', -CF₃, -OCF₃, -SCF₃, -F, -Cl, I, -Br, -COOR', -COR', -O(CH₂)₄N(R)(R'), -O(CH₂)₃N(R)(R'), -O(CH₂)₂N(R)(R'), -O(CH₂)N(R)(R'), -O(CH₂)₄CON(R)(R'), -O(CH₂)₃CON(R)(R'), -O(CH₂)₂CON(R)(R'), -O(CH₂)CON(R)(R'), -C(O)N(R)(R'), -(CH₂)₄OR', -(CH₂)₃OR', -(CH₂)₂OR', -CH₂OR', optionally substituted phenyl or benzyl, -N(R)(R'), -(CH₂)₄N(R)(R'), -(CH₂)₃N(R)(R'), -(CH₂)₂N(R)(R'), -(CH₂)N(R)(R'), -SO₂N(R)(R'), -NRSO₂R', -CON(R)(R'), or -OSO₂R'.

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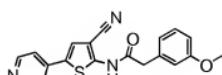
45. (Previously presented) The compound of claim 1, having one of the structures:



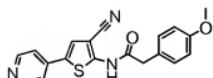
I-A-1



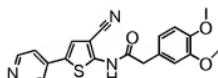
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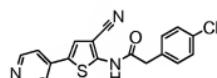
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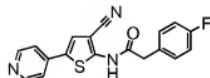
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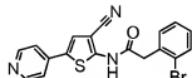
I-A-5



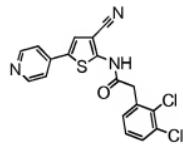
I-A-6



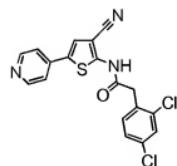
I-A-7



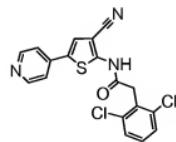
I-A-8



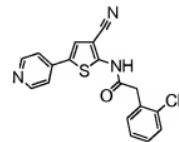
I-A-9



I-A-10

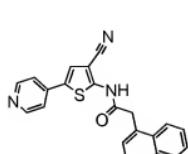


I-A-11

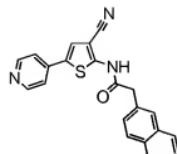


I-A-12

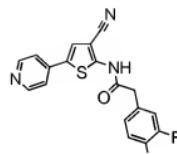
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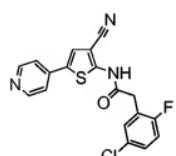
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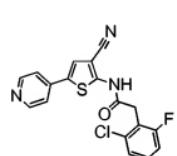
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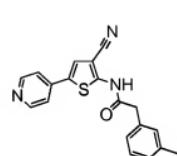
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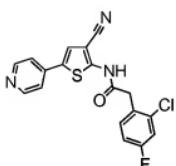
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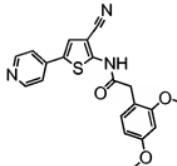
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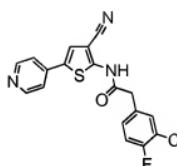
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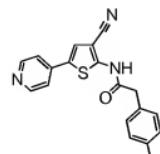
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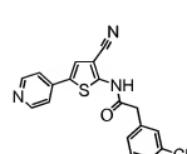
J-A-20



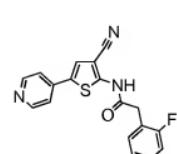
J-A-21



I-A-22

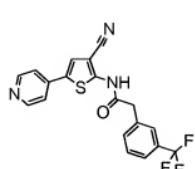


I-A-23

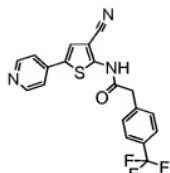


I-A-24

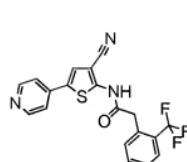
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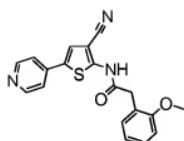
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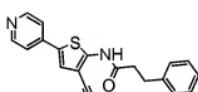
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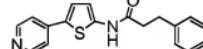
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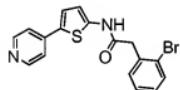
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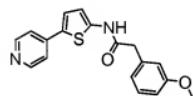
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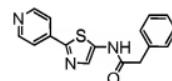
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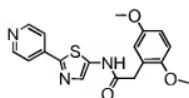
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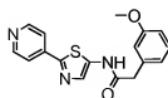
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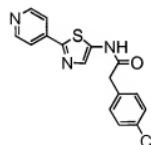
I-A-33



I-A-34

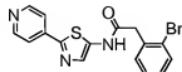


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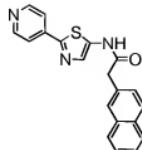


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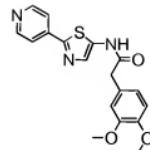
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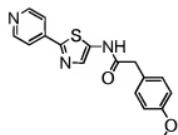
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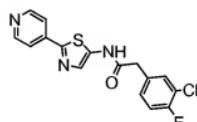
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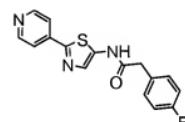
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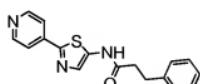
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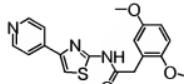
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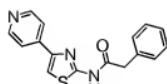
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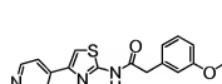
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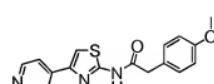
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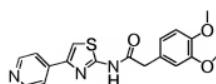
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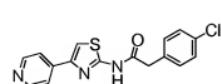
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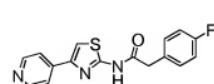
I-B-21



I-B-22

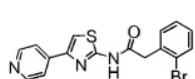


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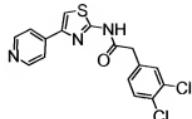


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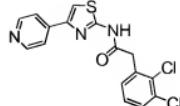
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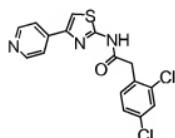
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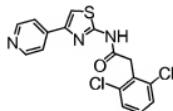
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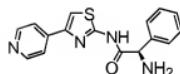
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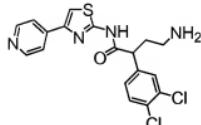
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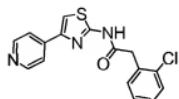
I-B-29



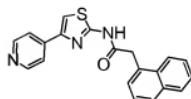
I-B-30



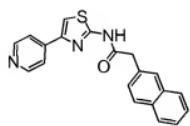
I-B-31



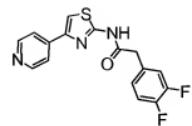
I-B-32



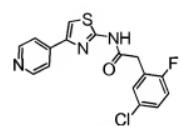
I-B-33



I-B-34

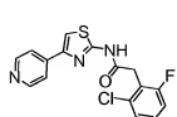


I-B-35

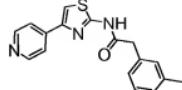


I-B-36

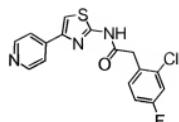
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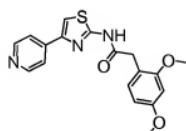
I-B-37



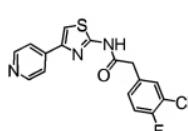
I-B-38



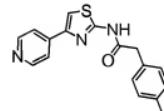
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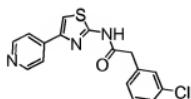
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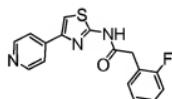
I-B-41



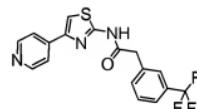
I-B-42



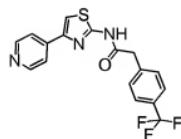
I-B-43



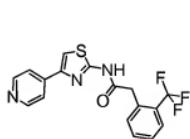
I-B-44



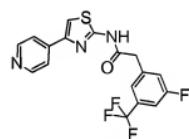
I-B-45



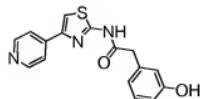
I-B-46



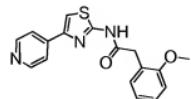
I-B-47



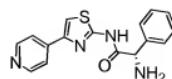
I-B-48



I-B-49

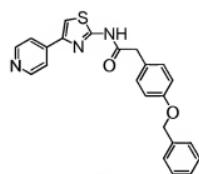


I-B-50

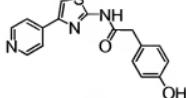


I-B-51

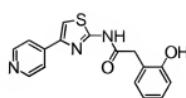
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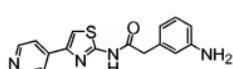
I-B-82



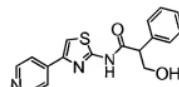
I-B-83



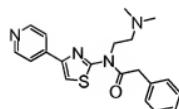
I-B-84



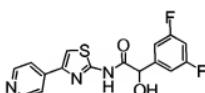
I-B-85



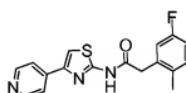
I-B-86



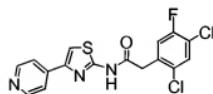
I-B-88



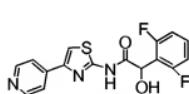
I-B-89



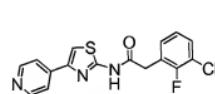
I-B-90



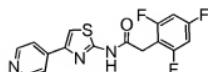
I-B-91



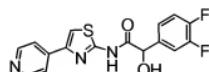
I-B-92



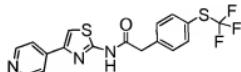
I-B-93



I-B-94

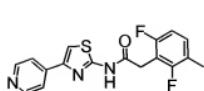


I-B-95

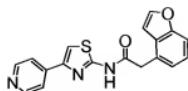


I-B-96

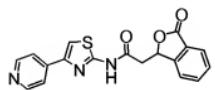
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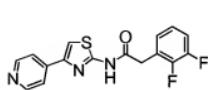
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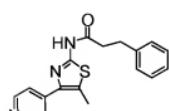
I-B-99



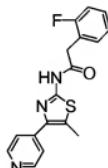
I-B-100



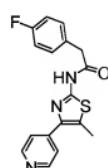
I-B-102



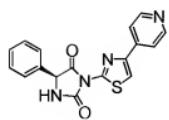
I-B-103



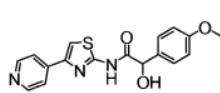
I-B-104



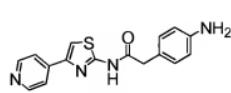
I-B-105



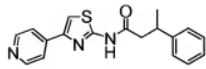
I-B-106



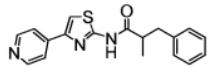
I-B-107



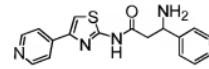
I-B-108



I-B-109

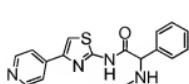


I-B-110

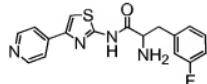


I-B-111

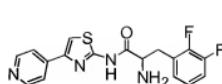
Applicants: Jingrong Cao et al.
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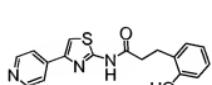
J-B-112



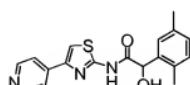
J-B-113



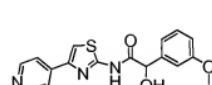
J-B-114



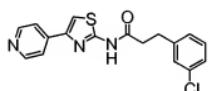
J-B-115



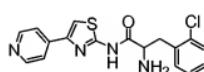
J-B-116



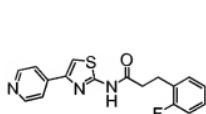
J-B-117



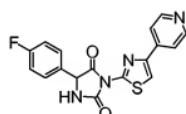
J-R-119



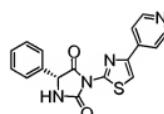
J-R-120



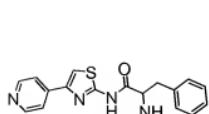
I-B-121



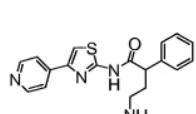
I-B-122



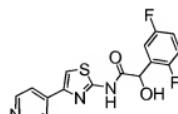
I-B-123



J-R-124

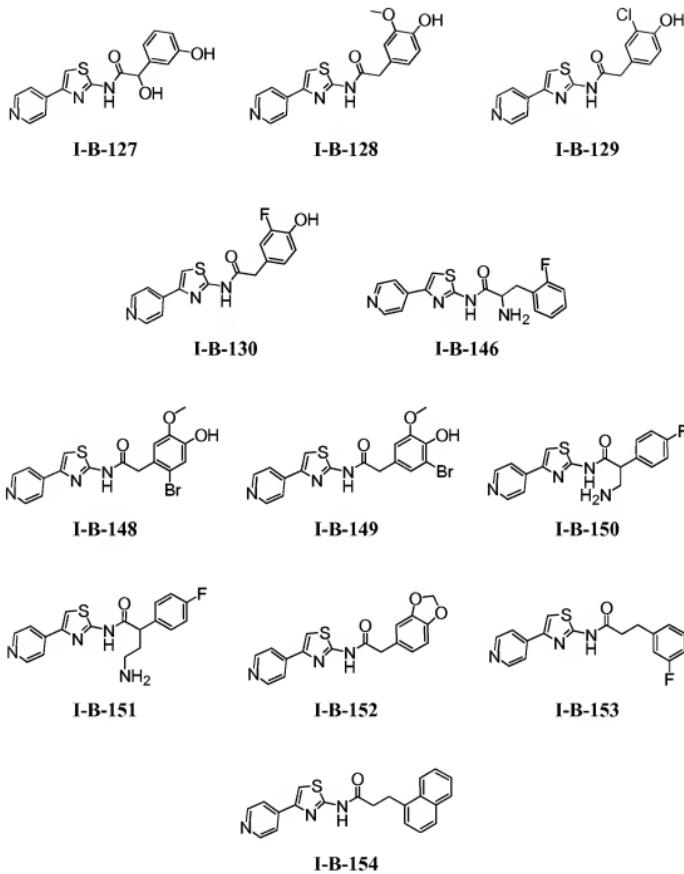


J-B-125

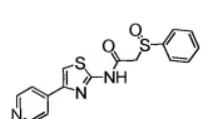


L-B-126

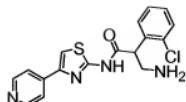
Applicants: Jingrong Cao et al.
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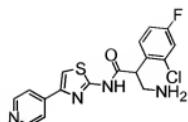
Applicants: Jingrong Cao et al.
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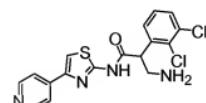
I-B-157



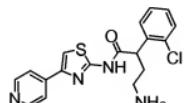
I-B-158



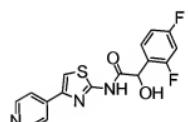
I-B-159



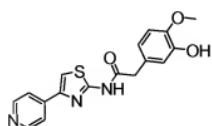
I-B-160



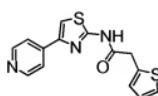
I-B-161



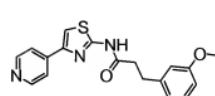
I-B-162



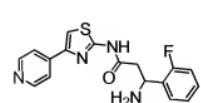
I-B-163



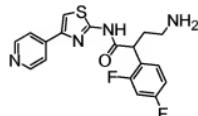
I-B-164



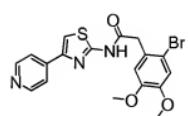
I-B-165



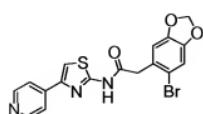
I-B-171



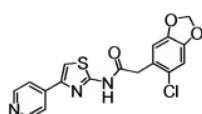
I-B-175



I-B-176

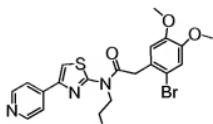


I-B-179

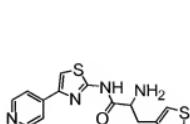


I-B-180

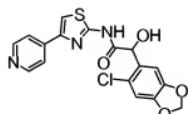
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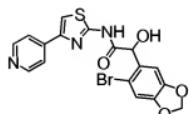
I-B-181



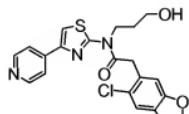
I-B-182



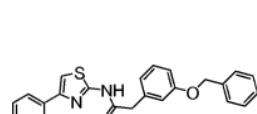
I-B-185



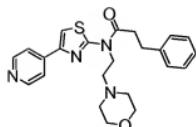
I-B-186



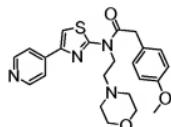
I-B-187



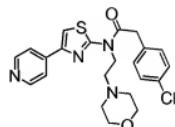
I-B-190



I-B-192

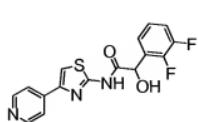


I-B-193

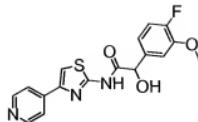


I-B-194

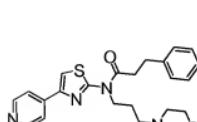
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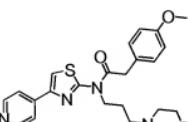
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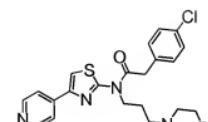
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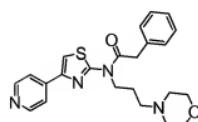
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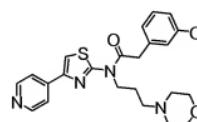
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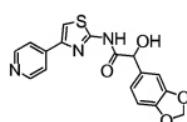
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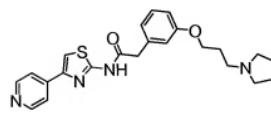
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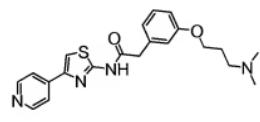
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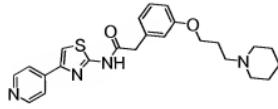
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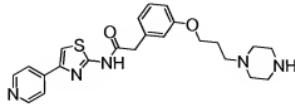
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I-B-206

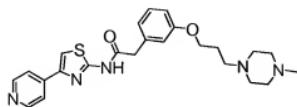


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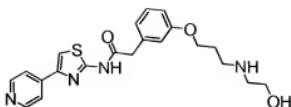


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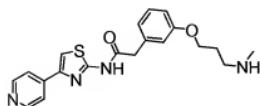
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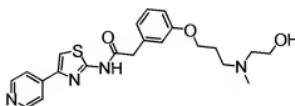
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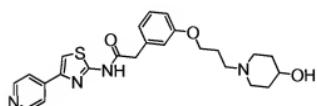
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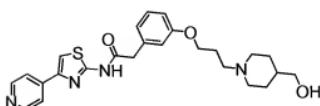
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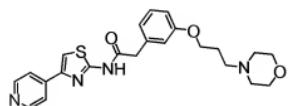
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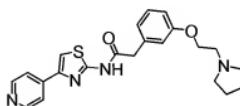
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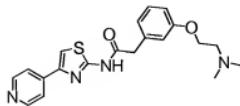
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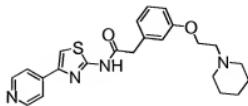
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J-B-216

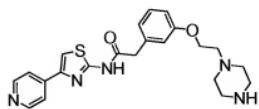


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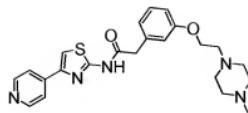


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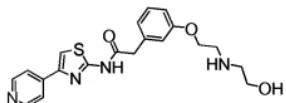
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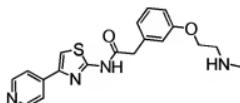
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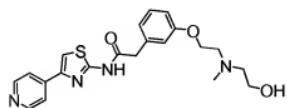
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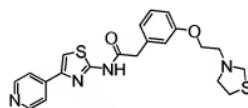
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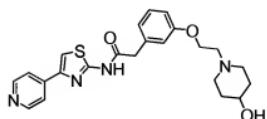
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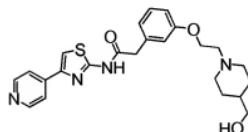
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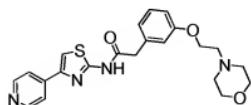
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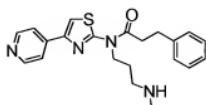
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I-B-226

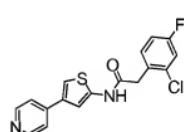
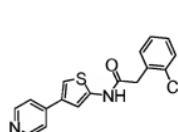
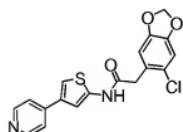
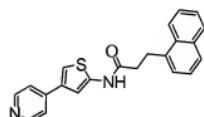
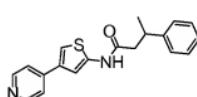
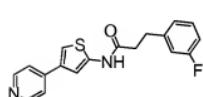
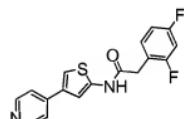
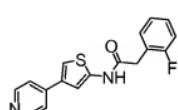
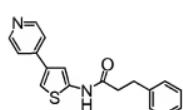
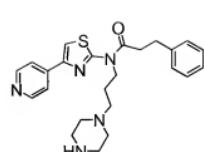
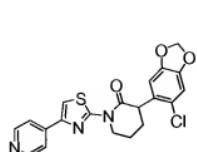
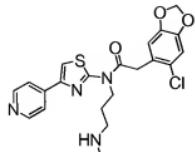


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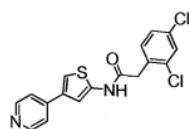


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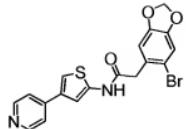
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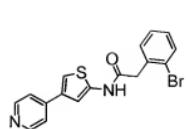
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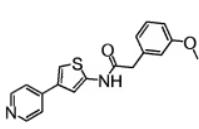
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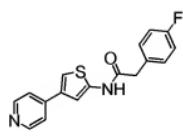
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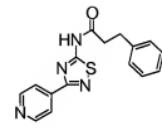
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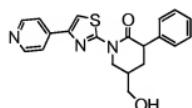
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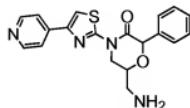
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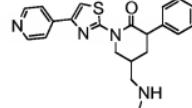
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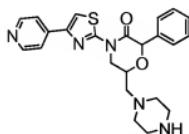
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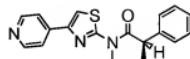
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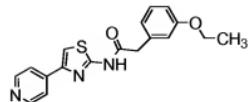
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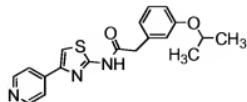
I-B-278



I-B-279

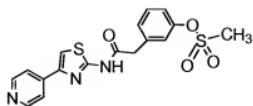


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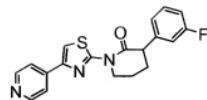


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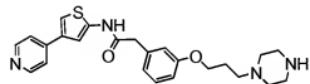
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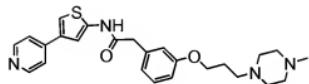
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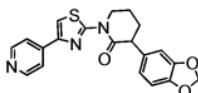
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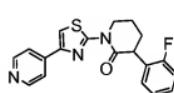
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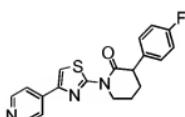
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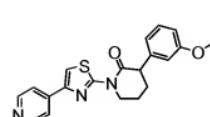
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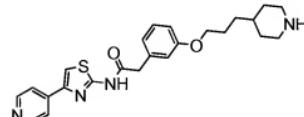
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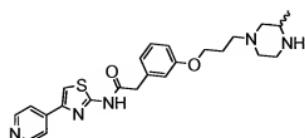
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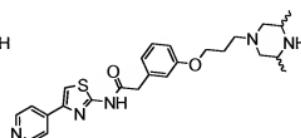
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I-B-290

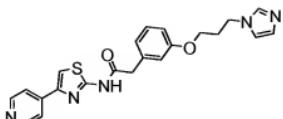


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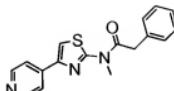


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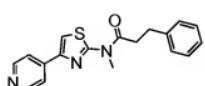
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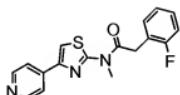
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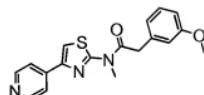
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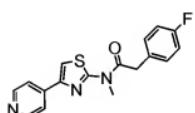
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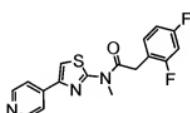
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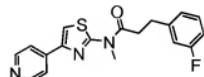
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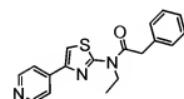
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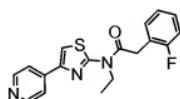
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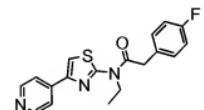
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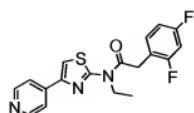
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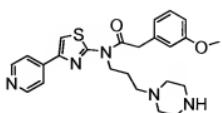
I-B-302



I-B-303

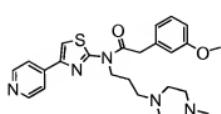


I-B-304

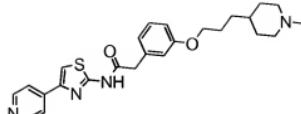


I-B-306

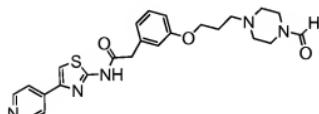
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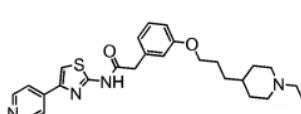
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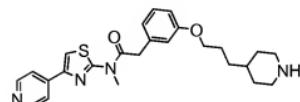
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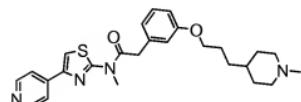
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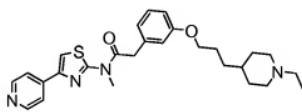
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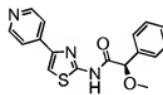
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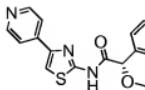
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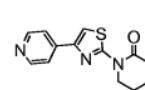
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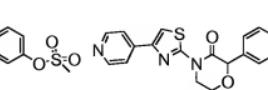
I-B-321



I-B-322

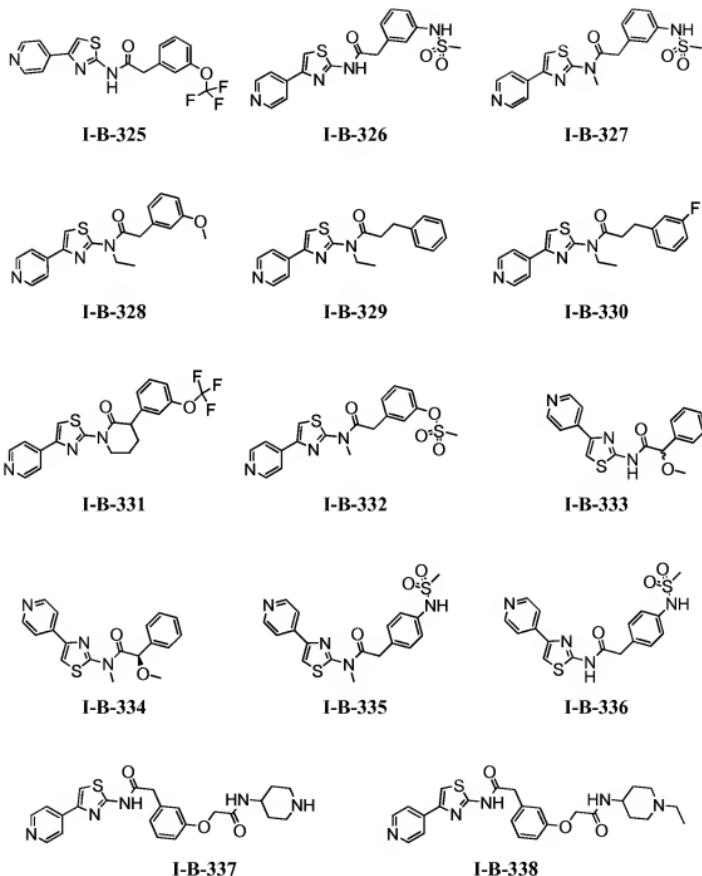


I-B-323

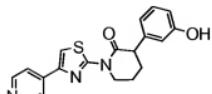


I-B-324

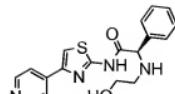
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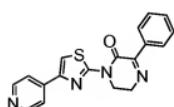
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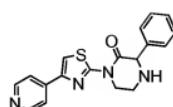
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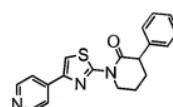
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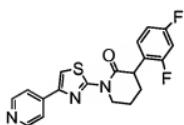
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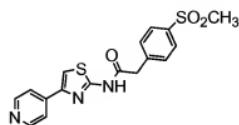
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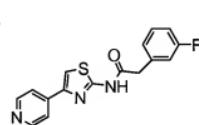
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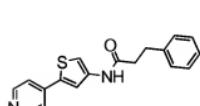
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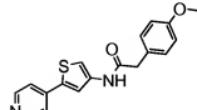
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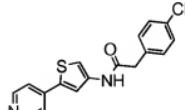
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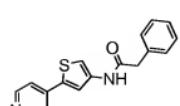
I-C-1



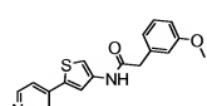
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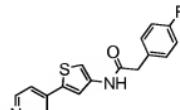
I-C-3



I-C-4

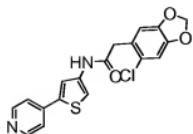


I-C-5

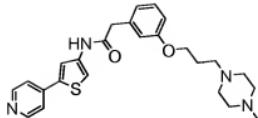


I-C-6

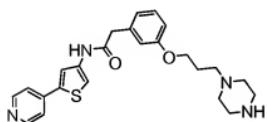
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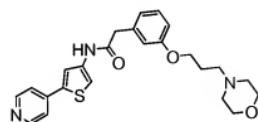
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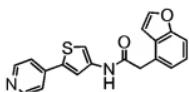
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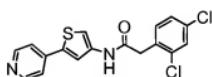
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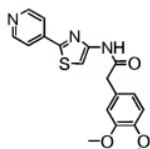
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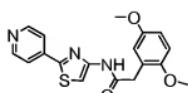
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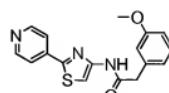
LG-12



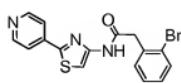
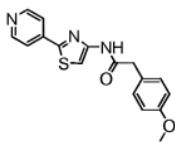
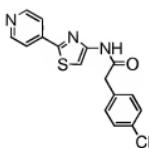
J-C-13



J-C-14

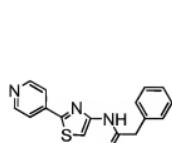


J-C-15



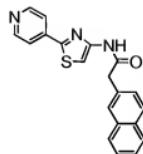
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I-C-16

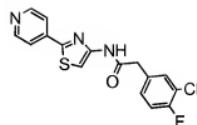


I-C-19

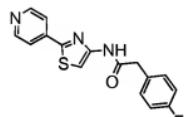
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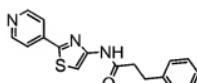
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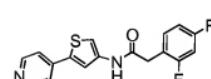
I-C-21



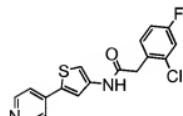
I-C-22



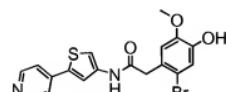
I-C-23



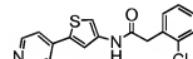
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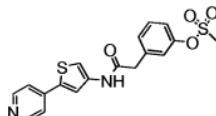
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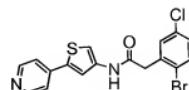
I-C-26



I-C-27

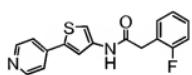


I-C-28

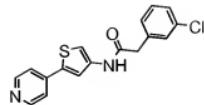


I-C-30

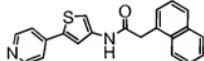
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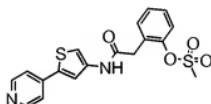
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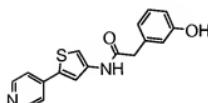
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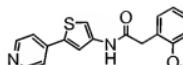
I-C-34



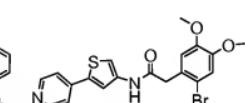
I-C-36



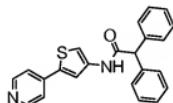
I-C-37



I-C-38



I-C-39



or I-C-41.

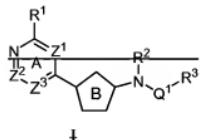
46. (Original) A composition comprising an effective amount of compound of claim 1, and a pharmaceutically acceptable carrier, adjuvant, or vehicle.

47-53. (Canceled)

54. (Currently amended) A method of treating or lessening the severity of a disease or disorder selected from glaucoma, Alzheimer's disease, an allergy, asthma, or diabetes in

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a patient, said method comprising administering to said patient a compound according to claim 1 or a composition comprising a compound having the formula:



or a pharmaceutically acceptable salt thereof, wherein:



R^1 is halogen, CN , NO_2 , or V_mR ;

Z^1 and Z^2 are each independently CR^Z , and Z^2 is CR^1 ;

each occurrence of R^2 is independently halogen, CN , NO_2 , or U_nR^1 ;

R^2 is U_nR^1 ;

X^1 and X^2 are each independently CR^4 or N ;

each occurrence of R^4 is independently halogen, CN , NO_2 , or V_mR ;

each occurrence of U or V is independently an optionally substituted C_{1-6} alkylidene chain, wherein up to two methylene units of the chain are optionally and independently replaced by NR , S , O , CS , CO_2 , OCO , CO , $COCO$, $CONR$, $NRCO$, $NRCO_2$, SO_2NR , $NRSO_2$, $CONRNR$, $NRCONR$, $OCONR$, $NRNR$, $NRSO_2NR$, SO_2 , or SO_2 ;

m and n are each independently 0 or 1;

each occurrence of R is independently hydrogen or an optionally substituted C_{1-6} aliphatic group; and each occurrence of R^1 is independently hydrogen or an optionally substituted C_{1-6} aliphatic group, a 3-8 membered saturated, partially unsaturated, or fully unsaturated monocyclic ring having 0-3 heteroatoms independently selected from nitrogen, oxygen, or sulfur, or an 8-12 membered saturated, partially unsaturated, or fully

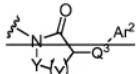
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unsaturated bicyclic ring system having 0-5 heteroatoms independently selected from nitrogen, oxygen, or sulfur; or R and R¹, two occurrences of R, or two occurrences of R¹, are taken together with the atom(s) to which they are bound to form an optionally substituted 3-12 membered saturated, partially unsaturated, or fully unsaturated monocyclic or bicyclic ring having 0-4 heteroatoms independently selected from nitrogen, oxygen, or sulfur;

Q¹ is CO, SO₂, or SO₂NR;

R² is Q²-Ar¹;

or R² and Q¹-R², taken together with the nitrogen atom, form the cyclic group:



, where s is 1 or 2, each occurrence of Y is independently, as valency and stability permit, CO, CS, SO₂, O, S, NR⁵, or C(R⁵)₂, and R⁵ is U_nR';

—Q² and Q³ are each independently a bond or a C₁₋₆ alkylidene chain, wherein up to two methylene units of the chain are each optionally and independently replaced by S, O, CS, CO₂, OCO, CO, COCO, CONR', NR'CO, NR'CO₂, SO₂NR', NR'SO₂, CONR'NR', NR'CONR', OCONR', NR'NR', NR'SO₂NR', SO, or SO₂; and wherein any carbon atom in the one or more methylene units is optionally substituted with one or two occurrences of R⁶, wherein each occurrence of R⁶ is independently halogen, CN, NO₂, or U_nR'; or two occurrences of R⁶; or R² and R⁶, taken together with the atoms to which they are bound, form an optionally substituted 3-6 membered cycloalkyl, heterocyclyl, aryl or heteroaryl ring;

Ar¹ is a 5-8 membered saturated, partially unsaturated, or fully unsaturated monocyclic ring having 0-3 heteroatoms independently selected from oxygen or sulfur, or an 8-12 membered saturated, partially unsaturated, or fully unsaturated bicyclic ring system having 0-5 heteroatoms independently selected from oxygen or sulfur; wherein Ar¹ is optionally substituted with 0-5 independent occurrences of TR⁷; wherein T is a

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bond or is a C₁-C₆ alkylidene chain wherein up to two methylene units of T are optionally and independently replaced by NR, S, O, CS, CO₂, OCO, CO, COCO, CONR, NRCO, NRCO₂, SO₂NR, NRSO₂, CONRNR, NRCONR, OCONR, NRNR, NRSO₂NR, SO, or SO₂;

Ar² is a 5-8 membered saturated, partially unsaturated, or fully unsaturated monocyclic ring having 0-3 heteroatoms independently selected from nitrogen, oxygen, or sulfur, or an 8-12 membered saturated, partially unsaturated, or fully unsaturated bicyclic ring system having 0-5 heteroatoms independently selected from nitrogen, oxygen, or sulfur, wherein Ar² is optionally substituted with 0-5 independent occurrences of TR⁷; wherein T is a bond or is a C₁-C₆ alkylidene chain wherein up to two methylene units of T are optionally and independently replaced by NR, S, O, CS, CO₂, OCO, COCO, CONR, NRCO, NRCO₂, SO₂NR, NRSO₂, CONRNR, NRCONR, OCONR, NRNR, NRSO₂NR, SO, or SO₂;

each occurrence of R⁷ is independently R', halogen, NO₂, or CN; and each of the optional substituents of said aryl or heteroaryl ring is selected from halogen; R²; OR²; SR²; phenyl optionally substituted with R²; O(phenyl), optionally substituted with R²; (CH₂)₁₋₂(phenyl), optionally substituted with R²; -CH=CH(phenyl), optionally substituted with R²; NO₂; CN; N(R²); NR²C(O)R²; NR²C(S)R²; NR²C(O)N(R²); NR²C(S)N(R²); NR²CO₂R²; NR²NR²C(O)R²; NR²NR²C(O)N(R²); NR²NR²CO₂R²; C(O)C(O)R²; C(O)CH₂C(O)R²; CO₂R²; C(O)R²; C(S)R²; C(O)N(R²); C(S)N(R²); OC(O)N(R²); OC(O)R²; C(O)N(OR²); R²; C(NOR²)R²; S(O)R²; S(O)R²; SO₂N(R²); S(O)R²; NR²SO₂N(R²); NR²SO₂R²; N(OR²)R²; C(-NH)N(R²); P(O)R²; PO(R²)₂; P(O(R²))₂; (CH₂)₁₋₂NHC(O)R²; wherein each independent occurrence of R² is selected from hydrogen, an optionally substituted C₁₋₆ aliphatic, an unsubstituted 5-6 membered heteroaryl or heterocyclic ring, phenyl, O(phenyl), or -CH₂(phenyl), wherein optional

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substituents on the aliphatic group of R^o are selected from NH_2 , $NH(C_{1-4}$ aliphatic), $N(C_{1-4}$ aliphatic) $_2$, halogen, C_{1-4} aliphatic, OH , $O(C_{1-4}$ aliphatic), NO_2 , CN , CO_2H , $CO_2(C_{1-4}$ aliphatic), $O(haloC_{1-4}$ aliphatic), or $haloC_{1-4}$ aliphatic, or two independent occurrences of R^o , on the same substituent or different substituents, taken together with the atom(s) to which each R^o group is bound, form a 3-12 membered saturated, partially unsaturated, or fully unsaturated monocyclic or bicyclic ring having 0-4 heteroatoms independently selected from nitrogen, oxygen, or sulfur; and

each of the optional substituents on said alkylidene chain, aliphatic, cycloalkyl, or heterocyclyl is selected from the list of optional substituents of optional substituents for aryl and heteroaryl rings and further comprise $=O$, $=S$, $=NNHR^{\pm}$, $=NN(R^{\pm})_2$, $=NNHC(O)R^{\pm}$, $=NNHCO_2(alkyl)$, $=NNHSO_2(alkyl)$, or $=NR^{\pm}$, where each R^{\pm} is independently selected from hydrogen or a C_{1-6} aliphatic group.

55. (Currently amended) The method of claim 54, wherein said method compound or composition is used to treat or lessen the severity of an allergy or asthma.

56. (Currently amended) The method of claim 54, wherein said method compound or composition is used to treat or lessen the severity of diabetes.

57. (Currently amended) The method of claim 54, wherein said method compound or composition is used to treat or lessen the severity of glaucoma.